

Application Ser. No.: 09/526,100
Attorney Docket No.: BCS03520-P01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.: 09/526,100
Confirm. No.: 9168
Inventor: Steven Sheppard et al.
Filing Date: March 15, 2000
Title: Optical Conversion Device
Examiner: Ustaris, Joseph G.
Art Unit: 2623
Atty. Docket No.: BCS03520-P01

Mail Stop Appeal
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

In response to the Final Rejection mailed on March 6, 2007, please enter this Appeal Brief. The Notice of Appeal and associated fee were filed on November 22, 2006 along with a Request for a Pre-Appeal Conference. The Pre-Appeal Conference decided to re-open prosecution on January 12, 2007 and the outstanding Final Rejection followed. The required fee for filing an Appeal Brief is enclosed herewith.

(I) *Real Party in Interest*

Motorola Wireline Networks, Inc. (formerly named Next Level Communications, Inc.), a wholly owned subsidiary of General Instrument Corporation, which is a wholly owned subsidiary of Motorola, Inc., is the real party in interest.

(II) *Related Appeals and Interferences*

There are no known related appeals or interferences.

(III) *Status of the Claims*

Claims 1-38 are cancelled.

Claims 39-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,812,184 to Martinez.

Applicant appeals all pending claims 39-45.

(IV) *Status of Amendments*

No amendments after the Final Rejection mailed on March 6, 2007 have been submitted.

(V) *Summary of the Claimed Subject Matter*

In general, the invention relates to an optical conversion device that receives an optical signal and converts it to an RF signal and then transmits that RF signal over a media. See page 6, lines 3-6. This device assists users in a residential or commercial environment to control a residential gateway (RG) (200) using an optical remote control

(700). See page 21, lines 5-27 and Figure 6. In such an environment there may obstacles that do not permit the optical signal to travel between the remote control 100 and the residential gateway (200). Id. By converting the optical signal to an RF signal, the signal can be transmitted to the residential gateway over a cable or wire and thus get around the obstacles. Id.

Claim 39 is a device for converting an optical signal into an RF signal and then transmitting the RF signal over a media. See page 6, lines 3-6. The device comprises an optical receiver (page 21, line 16; Figure 7, element 710), a bias switch (page 22, line 5; Figure 7, element 730), an oscillator (page 22, line 8; Figure 7, element 740) and a diplexer (page 22, line 15; Figure 7, element 760).

Claim 44 is a device for converting an optical signal into an RF signal and then transmitting the RF signal over a media. See page 6, lines 3-6. The device comprises an optical receiver (page 21, line 16; Figure 7, element 710), a bias switch (page 22, line 5; Figure 7, element 730), an oscillator (page 22, line 8; Figure 7, element 740) and a diplexer (page 22, line 15; Figure 7, element 760).

(VI) Grounds of Rejection to be Reviewed on Appeal

Whether the rejection of claims 39-45 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,812,184 to Martinez is proper.

(VII) Argument

In the Final Rejection mailed March 6, 2007, the Examiner asserts “Martinez does not explicitly disclose that the ‘bias switch’ turns on and off solely in response to the

pulse train.” See Final Rejection mailed March 6, 2007, page 3. The Examiner goes on to argue that it would have been obvious to one of ordinary skill in the art to change Martinez’s TDM slot selector 29 to always output a constant gating signal (e.g., a logical 1) so that the AND gate 59 would therefore “turn on and off in response to the pulse train.” Id.

To support this modification, the Examiner cites to the dedicated channel used to forward user responses described in Martinez’s column 5, lines 41-45. To put it another way, the Examiner asserts that a dedicated channel obviates the need for the varying TDM slot selector signal. This assertion by the Examiner is incorrect.

The Examiner has misread the cited passage in Martinez. Martinez’s column 5, lines 41-45 states:

The responses [plural] may be either superimposed co-channelled with a TV program, or on a dedicated channel [singular] or time slot as may be required in future CATV delivery systems. (Emphasis added).

The Examiner has assumed that this passage in Martinez allows for each subscriber to have his own dedicated channel. However, Martinez clearly states that the plural responses from the plural subscribers are transmitted on a single dedicated channel. Thus, multiple users must share a single channel to carry information. In order for this to occur, Martinez must employ a circuit that avoids data collisions among two or more subscriber responses.

Martinez’s solution is to employ a TDM slot selector 29 that dictates when a particular subscriber may output a response on the downlink. See column 6, lines 50-53. By effectively rendering the TDM slot selector circuit 29 moot in the modification described above, the Examiner has changed Martinez’s system to have data collisions.

Thus, multiple subscribers will “talk” over each other and render their respective responses noisy and meaningless. Martinez expressly avoids this by having the TDM slot selector 29 assign when each subscriber may output a response. Id. Since the Examiner’s modification destroys the purpose and functionality of Martinez’s system, it follows that the Examiner’s rejection is improper and should be reversed.

For at least these reasons, the Examiner’s rejection should be reversed and the application allowed.

(VIII) Claims Appendix

A copy of the claims, as amended by the amendment filed herewith, is attached.

(IX) Evidence Appendix

No additional evidence is provided in an evidence appendix.

(X) Related Proceedings Appendix

No related proceedings are provided in a related proceedings appendix.

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Respectfully submitted,

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CLAIMS APPENDIX

1 – 38. (Cancelled)

39. An optical conversion device for receiving optical signals, converting the optical signals to RF signals, and transmitting the RF signals over media, the optical conversion device comprising:

- an optical receiver for detecting the optical signal and generating a corresponding pulse train;

- a bias switch connected to said optical receiver, said bias switch turning on and off solely in response to the pulse train;

- an oscillator connected to said bias switch for producing a modulated RF signal, the modulated RF signal being produced by said oscillator turning on and off in response to said bias switch; and

- a diplexer filter for directionally injecting the RF signal onto the media.

40. The optical conversion device of claim 39, further comprising an attenuator connected between said oscillator and said diplexer for reducing the amplitude of the RF signal.

41. The optical conversion device of claim 39, wherein the optical conversion device is connected to a television and receives optical signals corresponding to channel select commands associated with the television from a corresponding remote control device.

42. The optical conversion device of claim 41, wherein said diplexer filter injects the RF signal onto the media in the direction of the direction of a residential gateway that controls communications between the television and a telecommunications network.

43. The optical conversion device of claim 39, wherein the media is a coaxial cable.

44. An optical conversion device for receiving optical signals representing channel select commands from an optical remote control device associated with a television, converting the optical signal to an RF signal, and transmitting the RF signal over media to a residential gateway, the optical conversion device comprising:

- an optical receiver for detecting the optical signal and generating a corresponding pulse train;

- a bias switch connected to said optical receiver, said bias switch turning on and off solely in response to the pulse train;

- an oscillator connected to said bias switch for producing a modulated RF signal, the modulated RF signal being produced by said oscillator turning on and off in response to said bias switch; and

- a diplexer filter for injecting the RF signal onto the media in the direction of the residential gateway.

45. The optical conversion device of claim 44, further comprising an attenuator connected between said oscillator and said diplexer for reducing the amplitude of the RF signal.